



MATERIAL GENERAL SERVICES SPECIAL PROVISIONS
DIESEL FUEL (ALTERNATIVE FUEL BLEND) MGS-03-01A

1.0 DESCRIPTION. This specification covers Grade B20 Alternative Fuel Blends for use in Missouri Department of Transportation equipment designed to operate on diesel fuel oils.

2.0 GENERAL. Grade B20 Alternative Fuel Blend shall be a blend of low sulfur, on-highway petroleum-diesel and B100 Biodiesel, free from grit, acid, and fibrous or other foreign material likely to clog or injure pumps, injectors, valves, filters, etc. The color of the delivered fuel shall not be red.

3.0 COMPOSITION. Grade B20 Alternative Fuel Blend shall be a blend of petroleum-diesel and Biodiesel containing a minimum of 20% and a maximum of 21% of grade B100 Biodiesel.

4.0 TESTING.

4.1 The petroleum diesel portion of the fuel blend shall meet the Missouri requirements for diesel fuel (ASTM D 975, Standard Specification for Diesel Fuel Oils).

4.2 The Biodiesel portion of the fuel blend shall comply with the National Biodiesel Board Biodiesel specification for pure Biodiesel and shall meet the requirements of the ASTM Biodiesel Specification ASTM D 6751.

4.3 During the period from November 1 through March 31, a winter grade of diesel fuel shall be supplied and shall exhibit low temperature operability as verified by the Cloud Point, the Low Temperature Flow Test, or a combination of the Cold Filter Plugging Point and the Cloud Point as follows:

Low Temperature Operability Requirements	
Cloud Point, (ASTM D 2500), °F (°C), max.	-14 (-25)
Low Temperature Flow Test (LTFT) (ASTM D 4539), °F (°C), max.	-14 (-25)
Cold Filter Plugging Point (CFPP) (ASTM D 6371), °F (°C), max.	-14 (-25)

4.3.1 It is the supplier's option which of the above tests is used to test and certify the low temperature operability of the fuel, however, if the Cold Filter Plugging Point (CFPP) test is used, the Cloud Point shall have a maximum value no higher than 4°F (-16°C). Certified test results shall be supplied with the response to the request for bid for each test selected to certify the fuel. Any time that the low-temperature operability characteristics of the fuel blend changes, independent laboratory testing shall be performed to verify that the low temperature operability requirements are in accordance with this specification and the fuel shall be re-certified. The supplier's authorized representative shall sign certifications.

4.3.2 The Department reserves the right to examine the bills of lading covering shipments of both the petroleum diesel and Biodiesel portions of the blends supplied under this specification. The supplier shall provide ready access to all required documentation to verify compliance.

4.3.3 In addition to blending with No. 1-D fuel, the use of additives is permitted providing the blend meets the low temperature operability requirements of Section 4.3.

4.3.4 Acceptable alternative test procedures for the Cloud Point test are ASTM D 5771, Cloud Point of Petroleum Products (Optical Detection Stepped Cooling Method), ASTM D 5772, Cloud Point of Petroleum Products (Linear Cooling Rate Method) or ASTM D 5773, Cloud Point of Petroleum Products (Constant Cooling Rate Method).

5.0 SAMPLING AND ACCEPTANCE.

5.1 Samples may be taken at the destination during offloading of the fuel into Department tanks. Offloading shall not commence until the Department representative has been notified.

5.2 With the response to each request for bid, the supplier shall furnish a signed certification stating that all fuel to be delivered under the bid will meet all requirements of this specification. The signed certification statement shall be as follows:

This certifies that all fuel shipments made by this company under this bid will comply with MoDOT specifications for the fuel grade specified.

Signature: _____

5.3 Acceptance will be based on the certification furnished by the supplier and the results of any testing deemed necessary by the Department.

5.4 The supplier shall guarantee the removal and/or replacement of any shipment that does not meet the requirements of the specification. It is expressly understood that existing fuel contained in Department tanks that is contaminated by fuel that does not comply with these specifications shall also be replaced.

6.0 ORDERING INFORMATION. The specification material will be set forth in the bid request.